



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/829,525	04/22/2004	Kyle A. Brownell	410193.90155	7373

26710 7590 01/26/2005

QUARLES & BRADY LLP
411 E. WISCONSIN AVENUE
SUITE 2040
MILWAUKEE, WI 53202-4497

EXAMINER

HOPKINS, ROBERT A

ART UNIT	PAPER NUMBER
----------	--------------

1724

DATE MAILED: 01/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/829,525

Applicant(s)

BROWNELL ET AL.

Examiner

Robert A Hopkins

Art Unit

1724

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-56 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 10-12, 14-26, 28-31, 34-37, 40-47 and 50-55 is/are rejected.
- 7) ☒ Claim(s) 7-9, 13, 27, 32, 33, 38, 39, 48, 49 and 56 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>4-22-04</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-6,10-12,14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Deaver(2978064) taken together with More(6293983).

Deaver teaches an air purification system for removing airborne particles from an airflow, the system comprising a hood(10) having an inlet for receiving the airflow from a space beneath the hood and a hood outlet for exhausting the airflow to a duct, a filter(36) mounted within the hood, the filter having a porous filtration chamber containing at least one filtration chamber and the airflow flows through the filtration chamber and the filtration chamber removes airborne particles from the airflow to produce filtered airflow that is exhausted through the hood outlet, wherein the airflow path through the filter defines a substantially straight path. Deaver is silent as to a first filter mounted within the hood and disposed in the airflow to remove therefrom at least some of the airborne particles to produce a first filtered airflow. More discloses an air purification system for removing airborne particles from an airflow, the system comprising a hood(10) having an inlet for receiving the airflow from a space beneath the hood and a hood outlet for exhausting the airflow to a duct, a first filter (17) mounted within the hood and disposed in the airflow to remove therefrom at least some of the

Art Unit: 1724

airborne particles to produce a first filtered airflow, and a second filter(15) mounted within the hood and disposed downstream of the first filter, wherein the airflow path between the first and second filters defines a substantially straight path. It would have been obvious to someone of ordinary skill in the art at the time of the invention to provide a first filter upstream of the porous filtration chamber of Deaver so that airborne particles are first removed from a prefilter that extends the filter life of the downstream porous filtration chamber. More further teaches wherein no additional filters are disposed between the first filter and the hood inlet. Deaver further teaches wherein the second filtration chamber contains a plurality of filtration members. Deaver further teaches wherein the filtration members are formed from silica(column 2 lines 60-63). Deaver further teaches wherein the silica is porous. Deaver further teaches wherein the second filter is slidable with respect to the hood(column 4 lines 7-10). More further teaches wherein the first filtered airflow travels from the first filter to the second filter without passing through any additional filters. Deaver further teaches wherein the second filter is removable from the hood. Deaver further teaches wherein the filtration members are regenerative.

Claims 17-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Deaver(2978064) taken together with More(6293983).

Deaver teaches an air purification system for removing airborne particles from an airflow, the system comprising a hood(10) having an inlet for receiving the airflow and a hood outlet for exhausting the airflow, a filter connected to the hood , the filter having a filtration chamber that contains a plurality of silica filtration members that remove some

Art Unit: 1724

airborne particles from the airflow to produce filtered airflow that is exhausted through the hood outlet. Deaver is silent as to a first filter supported by the hood and positioned such that the airflow from the inlet passes through the first filter and at least a portion of the airborne particles therein are removed therefrom to produce a once-filtered airflow. More discloses an air purification system for removing airborne particles from an airflow, the system comprising a hood(10) having an inlet for receiving the airflow from a space beneath the hood and a hood outlet for exhausting the airflow to a duct, a first filter (17) supported by the hood and positioned such that the airflow from the inlet passes through the first filter and at least a portion of the airborne particles therein are removed therefrom to produce a once-filtered airflow and a second filter(15) mounted within the hood and disposed downstream of the first filter. It would have been obvious to someone of ordinary skill in the art at the time of the invention to provide a first filter supported by the hood and positioned such that the airflow from the inlet passes through the first filter and at least a portion of the airborne particles therein are removed therefrom to produce a once-filtered airflow so that airborne particles are first removed from a prefilter that extends the filter life of the downstream porous filtration chamber.

Claims 28-31,34-37, and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Deaver(2978064) taken together with More(6293983).

Deaver teaches an air filter system for removing airborne particles from air, the combination comprising a hood having a top wall and a vertical wall that join to define a hood chamber having an inlet in its bottom for receiving a flow of intake air containing airborne particles and an outlet in its top wall for exhausting the flow of air, and a filter

Art Unit: 1724

for receiving the once filtered airflow and producing filtered air that flows through the enclosed space to the hood outlet, the second filter having a porous filtration chamber containing a plurality of filtration members that remove airborne particles from the airflow. Deaver is silent as to a first filter for receiving the flow of intake air and being operable to remove airborne particles therefrom to produce once filtered airflow. More discloses an air purification system for removing airborne particles from an airflow, the system comprising a hood(10) having an inlet for receiving the airflow from a space beneath the hood and a hood outlet for exhausting the airflow to a duct, a first filter (17) supported by the hood and positioned such that the airflow from the inlet passes through the first filter and at least a portion of the airborne particles therein are removed therefrom to produce a once-filtered airflow and a second filter(15) mounted within the hood and disposed downstream of the first filter. It would have been obvious to someone of ordinary skill in the art at the time of the invention to provide a first filter supported by the hood and positioned such that the airflow from the inlet passes through the first filter and at least a portion of the airborne particles therein are removed therefrom to produce a once-filtered airflow so that airborne particles are first removed from a prefilter that extends the filter life of the downstream porous filtration chamber.

Claims 41-47,50-53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Deaver(2978064) taken together with More(6293983).

Deaver teaches a ventilation system for removing air from a food cooking area, the combination comprising a hood disposed above the food cooking area, the hood having walls which define a hood chamber for receiving intake air containing airborne

Art Unit: 1724

particles from the food cooking area below, a duct connected to an exhaust outlet on the hood for exhausting air from the hood chamber, and a filter for receiving the airflow and producing a filtered air that flows directly to the exhaust outlet, the filter having a filtration chamber containing a regenerative filtration material of silica. Deaver is silent as to a first filter for receiving the flow of intake air and being operable to remove airborne particles therefrom to produce once filtered airflow. More discloses an air purification system for removing airborne particles from an airflow, the system comprising a hood(10) having an inlet for receiving the airflow from a space beneath the hood and a hood outlet for exhausting the airflow to a duct, a first filter (17) supported by the hood and positioned such that the airflow from the inlet passes through the first filter and at least a portion of the airborne particles therein are removed therefrom to produce a once-filtered airflow and a second filter(15) mounted within the hood and disposed downstream of the first filter. It would have been obvious to someone of ordinary skill in the art at the time of the invention to provide a first filter supported by the hood and positioned such that the airflow from the inlet passes through the first filter and at least a portion of the airborne particles therein are removed therefrom to produce a once-filtered airflow so that airborne particles are first removed from a prefilter that extends the filter life of the downstream porous filtration chamber.

Claims 54 and 55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Deaver(2978064) taken together with More(6293983).

Deaver discloses a method of removing grease from an airflow through a hood of the type disposed over a food cooking area in a kitchen, the steps comprising drawing

Art Unit: 1724

incoming air into the hood from the cooking area, receiving air at a filter removable mounted at a location within the hood, adsorbing grease from the air into a porous filtration member, and outputting the filtered air into the ductwork. Deaver is silent as to a step of removing grease from the incoming air at a first filter mounted in the hood to produce once filtered air. More discloses a method of removing grease from an airflow through a hood disposed over a cooking area, including drawing incoming air into the hood from the cooking area, removing grease from the incoming air at a first filter mounted in the hood to produce once filtered air, and receiving the once filtered air at a second filter removably mounted in the hood at a location downstream from the first filter. It would have been obvious to someone of ordinary skill in the art at the time of the invention to provide a step of removing grease from the incoming air at a first filter mounted in the hood to produce once filtered air so that airborne particles are first removed from a prefilter that extends the filter life of the downstream porous filtration chamber.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Feisthammel et al(6833022) discloses an air purification system for use in fume exhaust hoods including a vortex filter and a filter cartridge including zeolites downstream of the vortex filter.

Allowable Subject Matter

Claims 7-9,13,27,32,33,38,39,48,49,56 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 7 and 32 recite "wherein the filtration member is formed from a ceramic". Deaver discloses a filtration member formed of silica. It would not have been obvious to someone of ordinary skill in the art to provide a filtration member formed from a ceramic because Deaver does not suggest such a modification. Claims 8 and 9 depend on claim 7 and also would be allowable upon incorporation of claim 7 into claim 1. Claim 33 depends on claim 32 and hence also would be allowable upon incorporation of claim 32 into claim 28.

Claim 13 recites "wherein the first filter is a centrifugal air filter presenting baffle plates". More discloses a first filter formed of an absorbent filter material. It would not have been obvious to someone of ordinary skill in the art to provide a first filter which is a centrifugal air filter presenting baffle plates because More does not suggest such a modification.

Claim 27 recites "wherein the first filter is a centrifugal air filter presenting a plurality of baffle plates". More discloses a first filter formed of an absorbent filter material. It would not have been obvious to someone of ordinary skill in the art to provide a first filter which is a centrifugal air filter presenting a plurality of baffle plates because More does not suggest such a modification.

Claims 38 and 48 recite "wherein the first filter is a centrifugal air filter". More discloses a first filter formed of an absorbent filter material. It would not have been

Art Unit: 1724

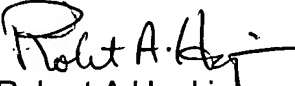
obvious to someone of ordinary skill in the art to provide a first filter which is a centrifugal air filter because More does not suggest such a modification. Claim 39 depends on claim 38 and hence would also be allowable upon incorporation of claim 38 into claim 28. Claim 49 depends on claim 48 and hence would also be allowable upon incorporation of claim 48 into claim 41.

Claim 56 recites "wherein step (F) further comprises: i) soaking the second filter in a detergent; and ii) washing the second filter in a dishwasher after performing step i)". Deaver discloses spraying the filter with hot water to regenerate the filter. It would not have been obvious to someone of ordinary skill in the art to provide a step of soaking the second filter in a detergent; and ii) washing the second filter in a dishwasher after performing step i) because Deaver does not suggest such a modification.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert A Hopkins whose telephone number is 571-272-1159. The examiner can normally be reached on Monday-Friday, 7am-4pm, alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on 571-272-1166. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Robert A Hopkins
Primary Examiner
Art Unit 1724

Rah
January 12, 2005